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FIGURE 1

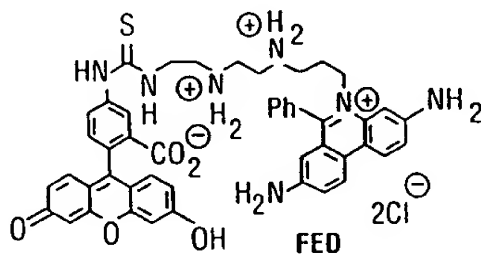
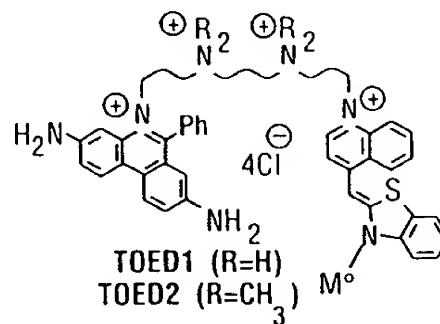
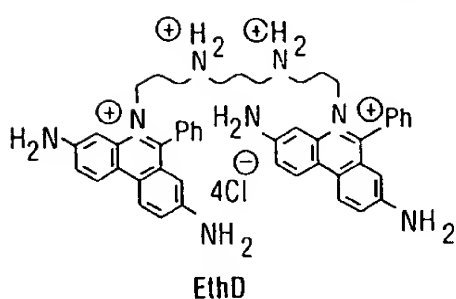
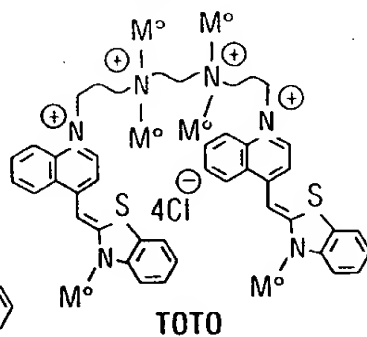
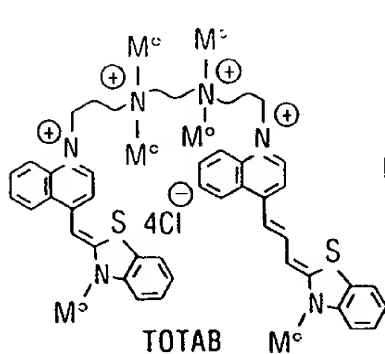
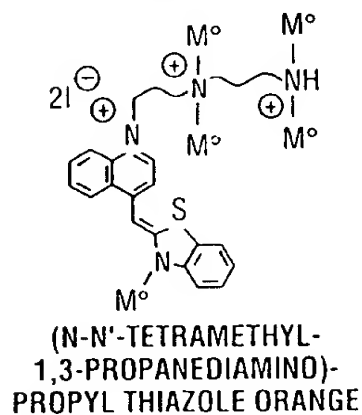
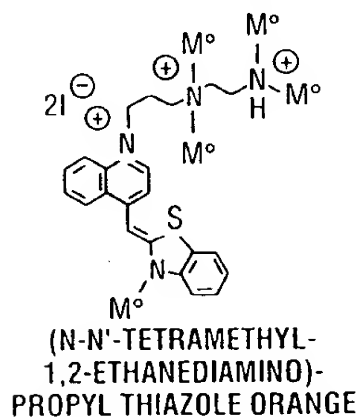
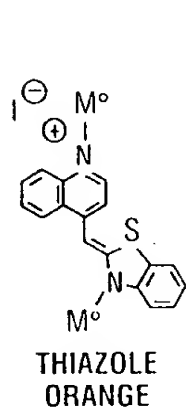
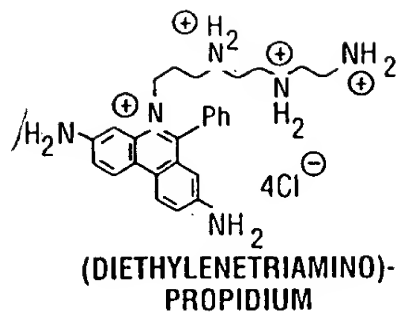
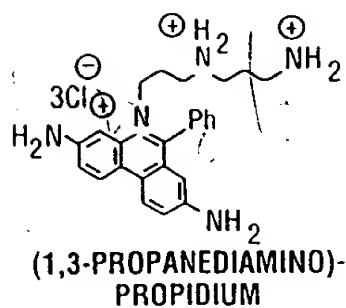
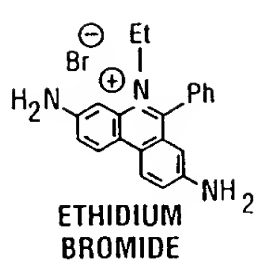


FIGURE 2

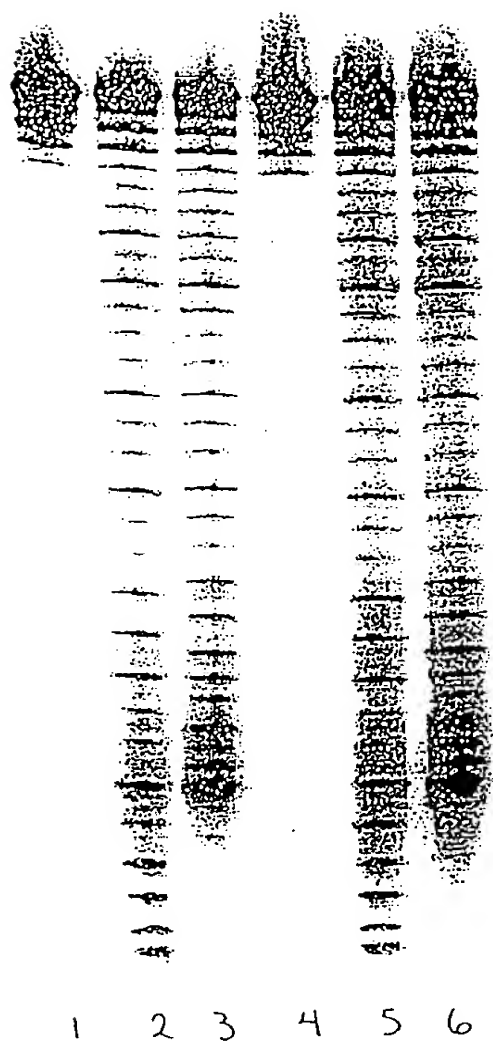


FIGURE 3

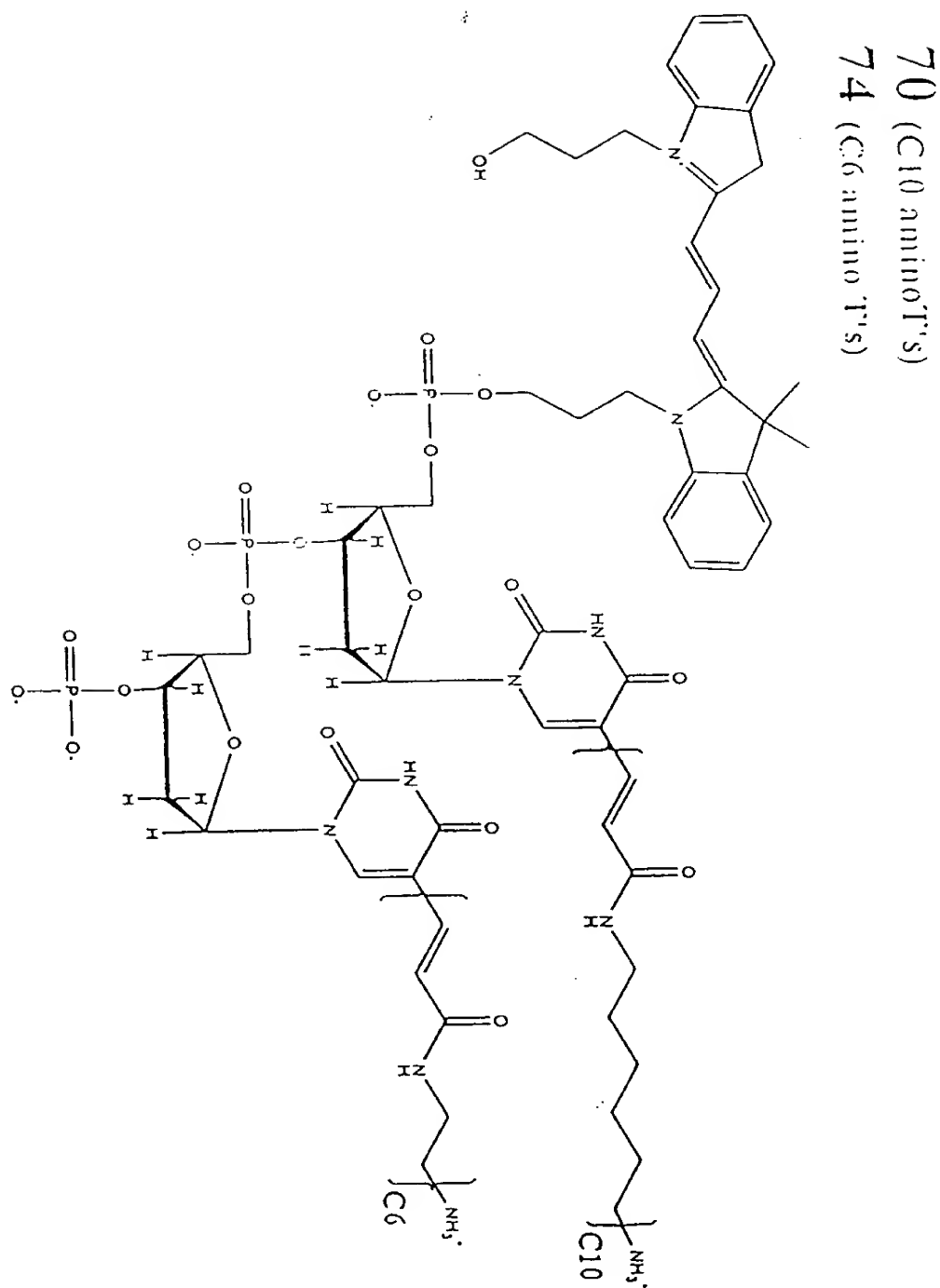
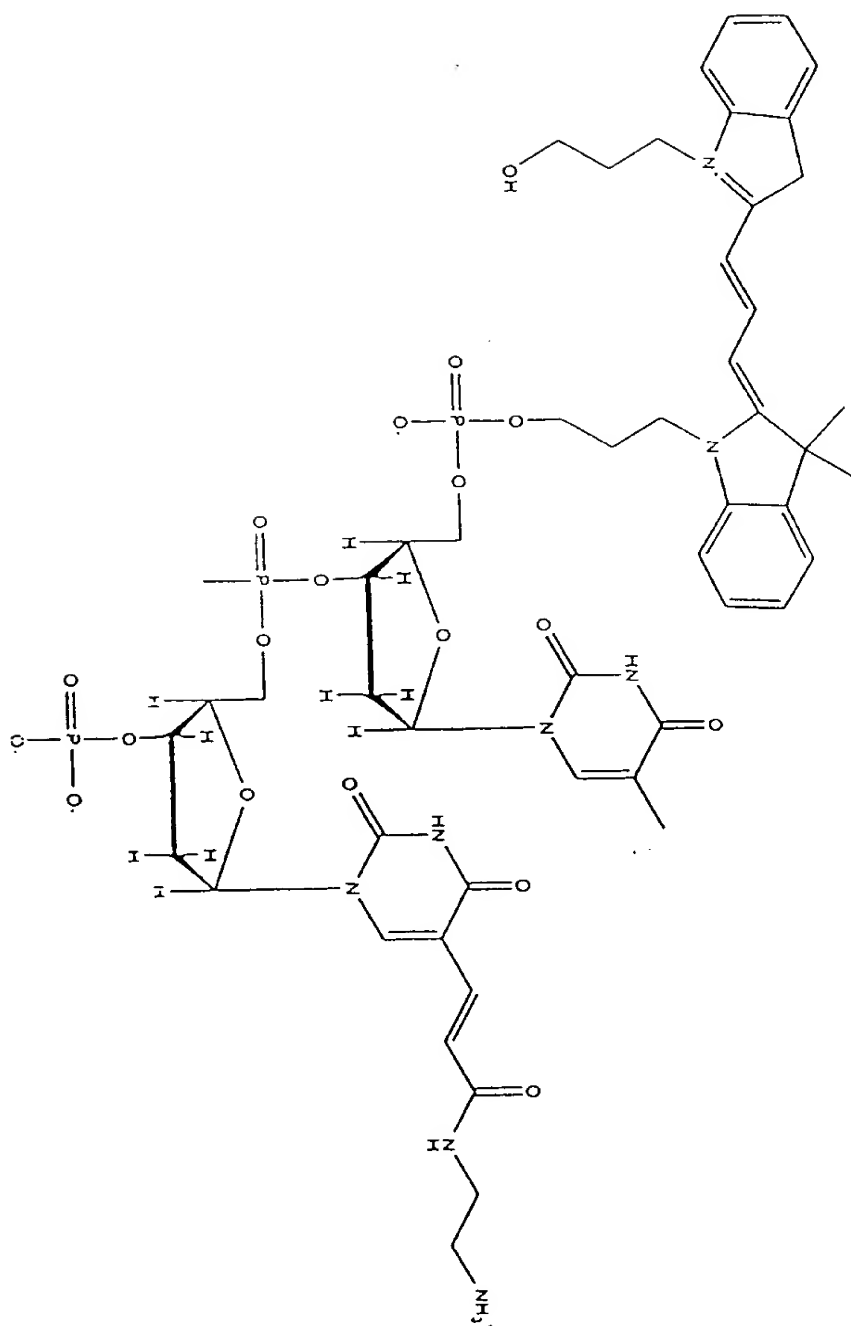
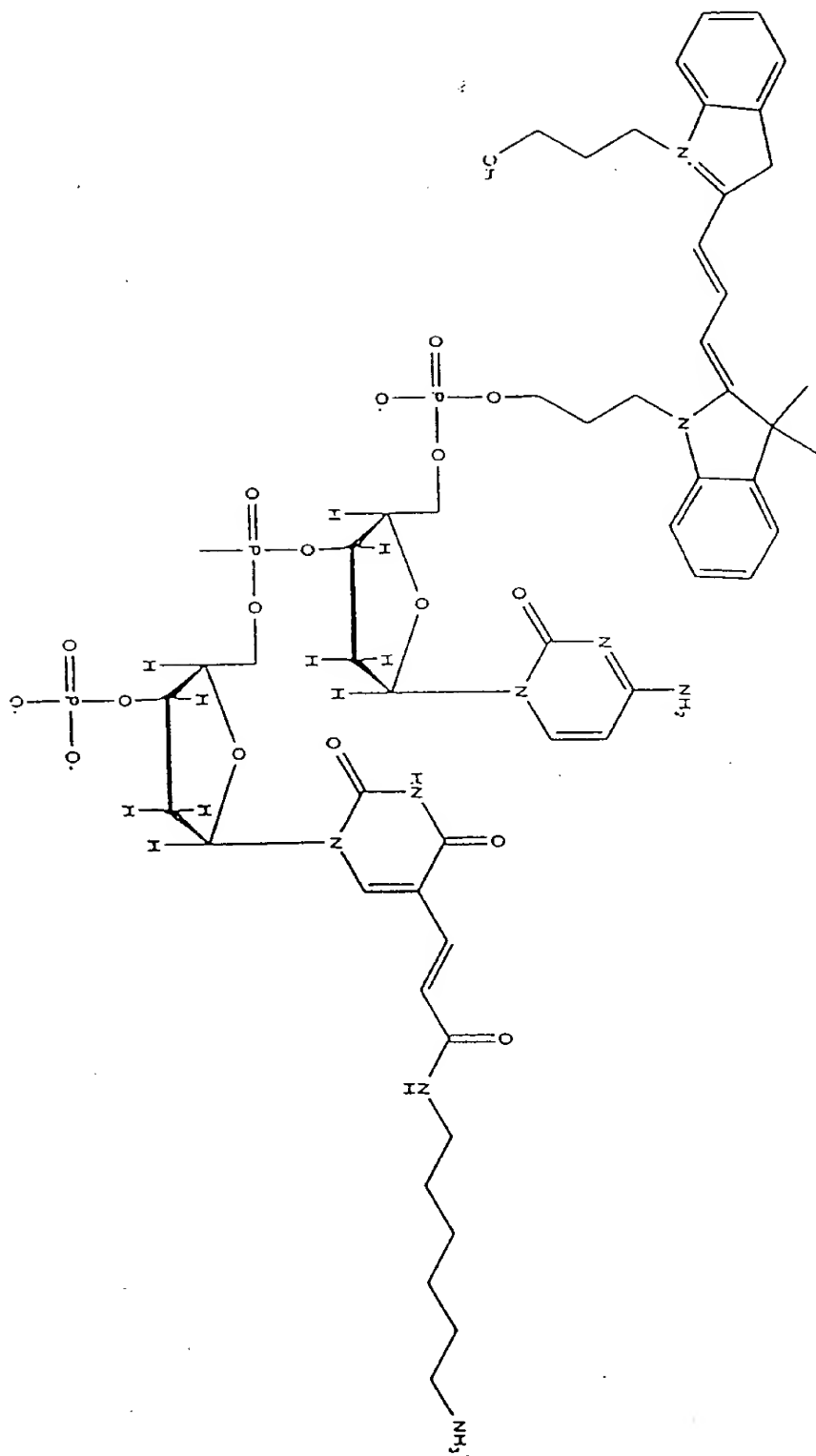


FIGURE 4a



75

FIGURE 4b



76

FIGURE 5

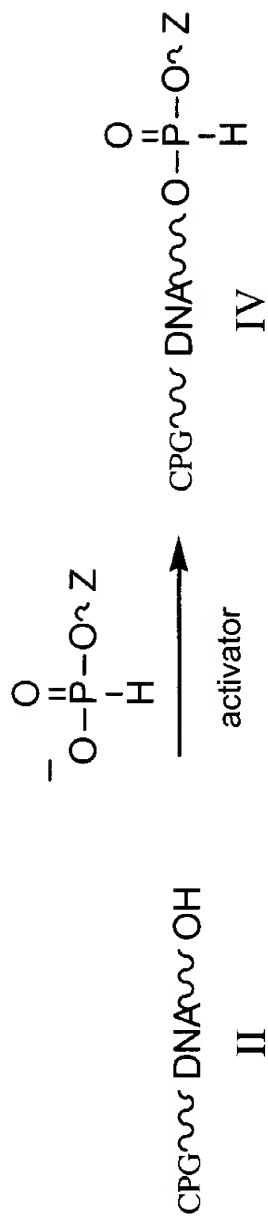
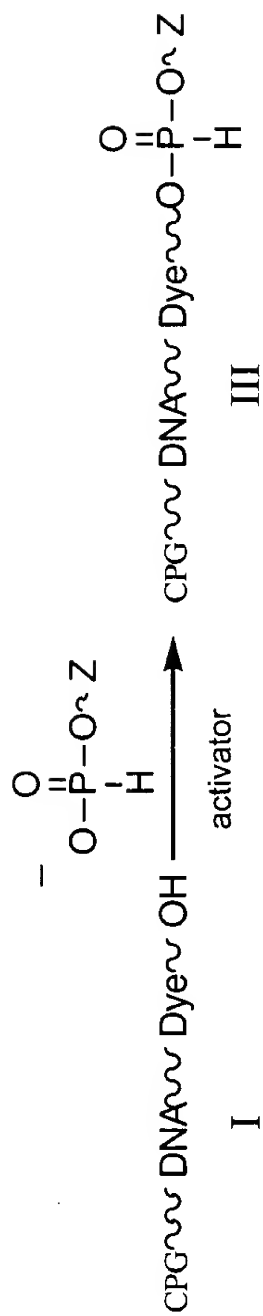
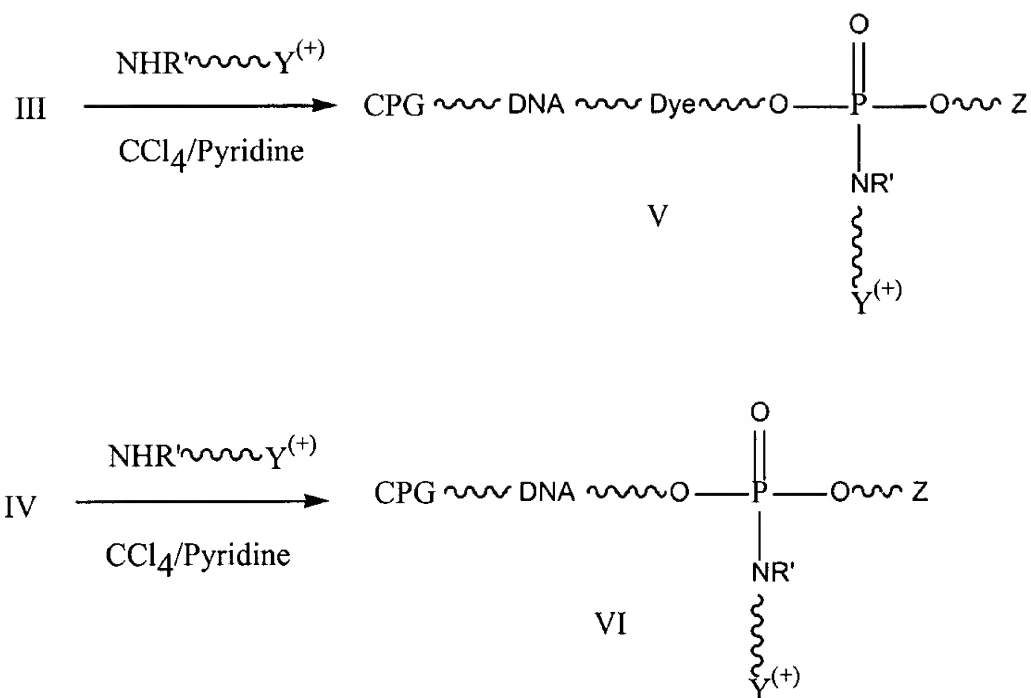


FIGURE 6



$\text{Y}^{(+)}$ = organic group capable to introduce positive charge

FIGURE 7

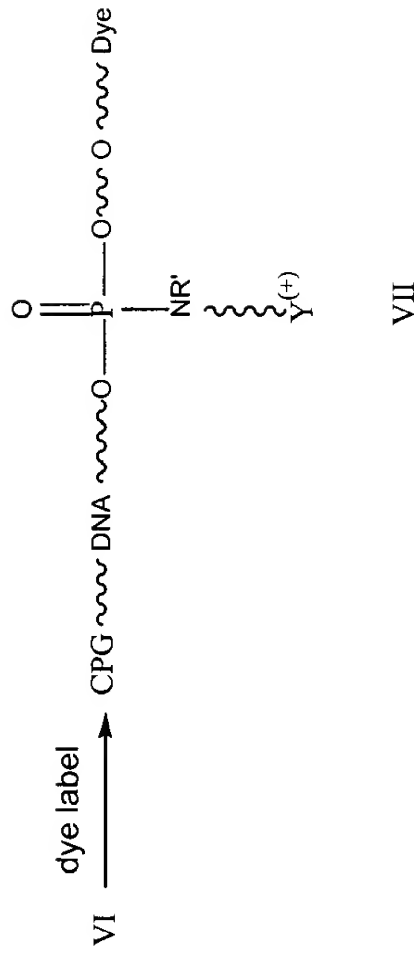
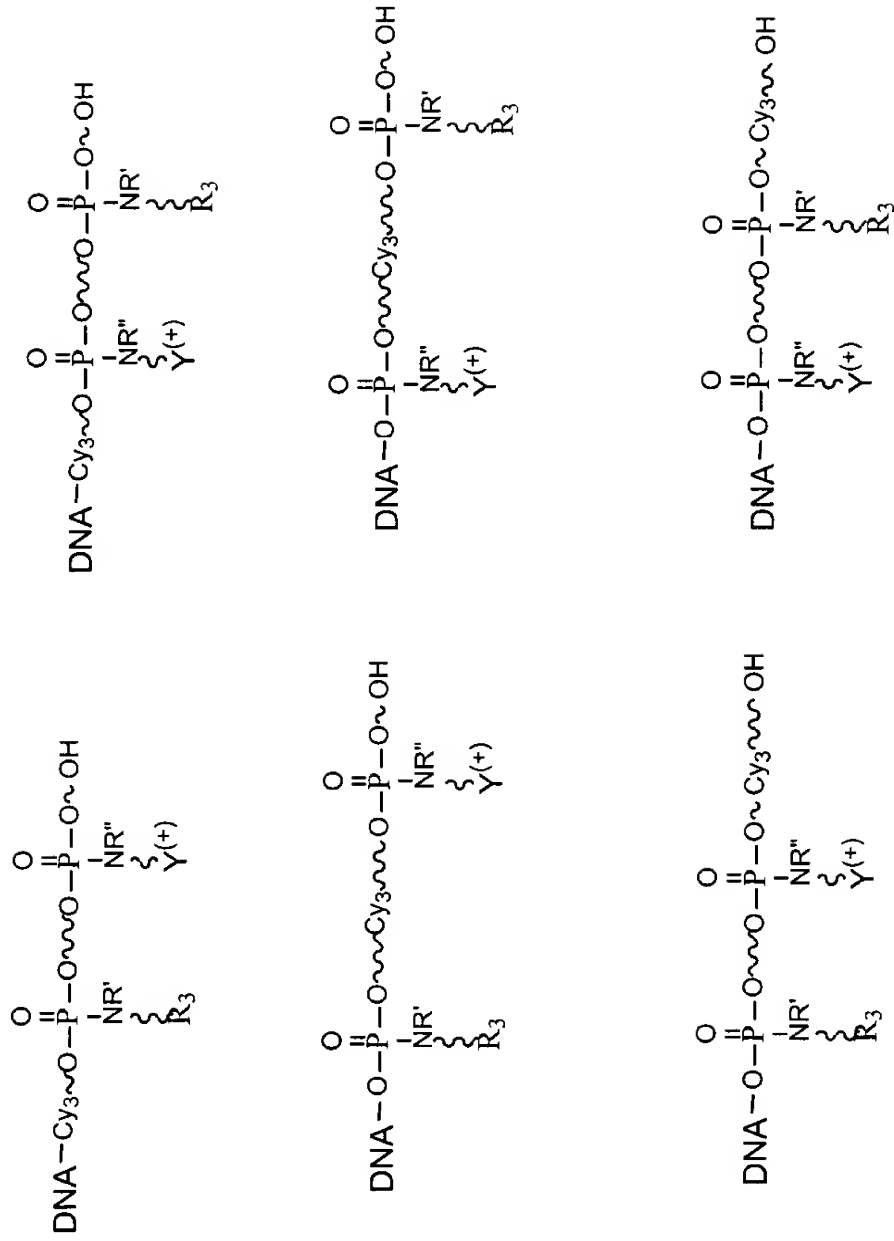


FIGURE 8



R', R'', R3 = H, alkyl, aryl

FIGURE 9

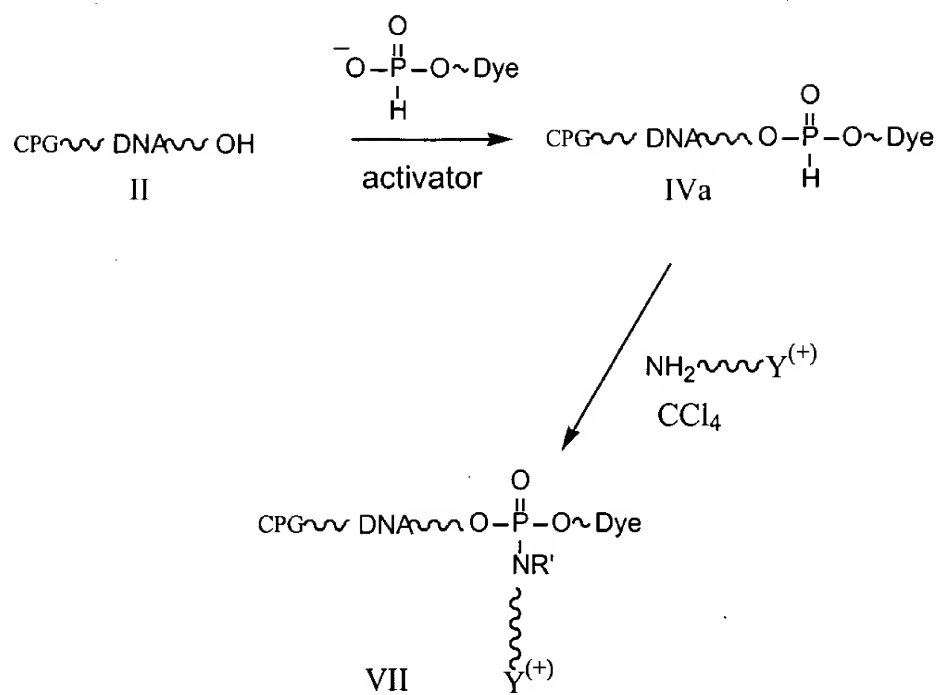


FIGURE 10

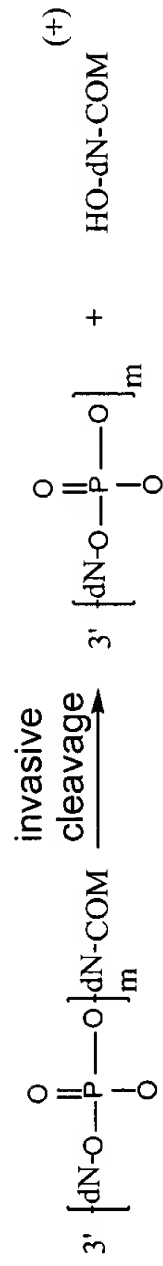
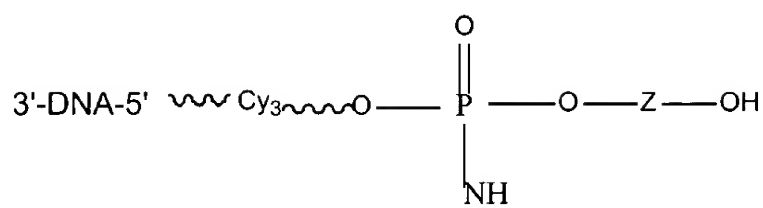
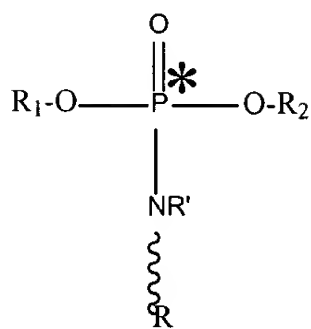


FIGURE 11



V-(Hex)	Z = C ₆ H ₁₂
V-(dT)	Z = dT
V-(dC)	Z = dC
V-(dA)	Z = dA
V-(dG)	Z = dG

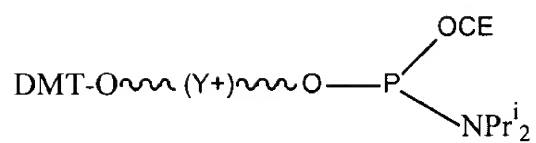
FIGURE 12



chiral phosphoramidate phosphorus atom

FIGURE 14

A.



B.

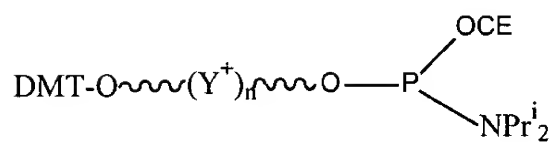
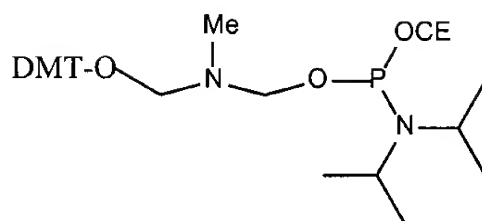


FIGURE 15

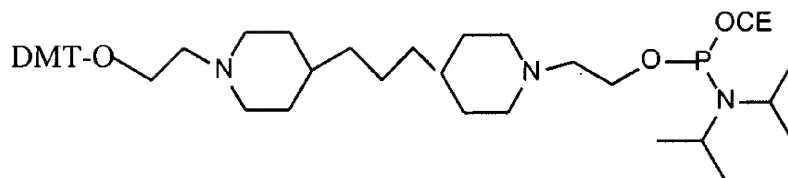
- A.
$$\begin{array}{cc} (0) & (+1) \\ 3'\text{-DNA} - (\text{DP}) - (\text{PCP}) \end{array}$$
- B.
$$\begin{array}{ccc} (0) & (0) & (+1) \\ 3'\text{-DNA} - (\text{DP}) - (\text{NP})_n - (\text{PCP}) \end{array}$$
- C.
$$\begin{array}{ccc} (0) & (-1) & (+1) \\ 3'\text{-DNA} - (\text{DP}) - (\text{PBB})_n - (\text{PCP})_{(n+1)} \end{array}$$
- D.
$$\begin{array}{cccc} (0) & (-1) & (+1) & (0) \\ 3'\text{-DNA} - (\text{DP}) - (\text{PBB})_n - (\text{PCP})_{(n+1)} - (\text{NP})_m \end{array}$$

FIGURE 16



Neutral Phosphoramidite

Net Charge : 0



Positively Charged Phosphoramidite

Net Charge : +1

FIGURE 18

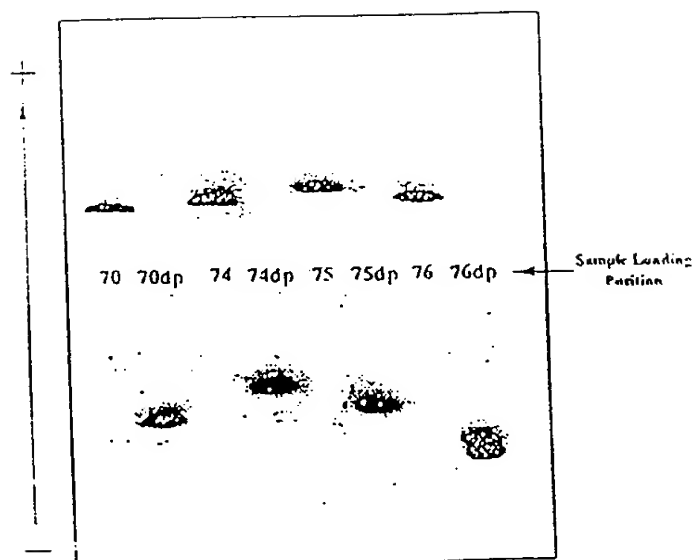
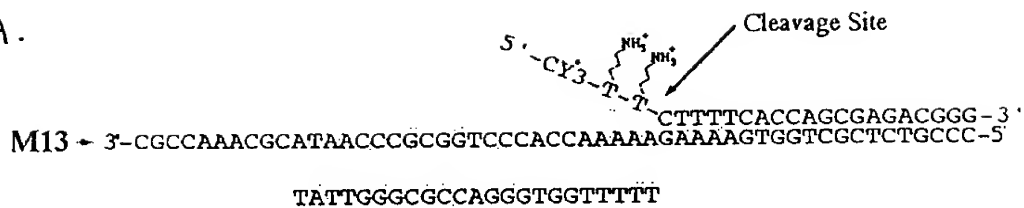


FIGURE 19

A.



B.

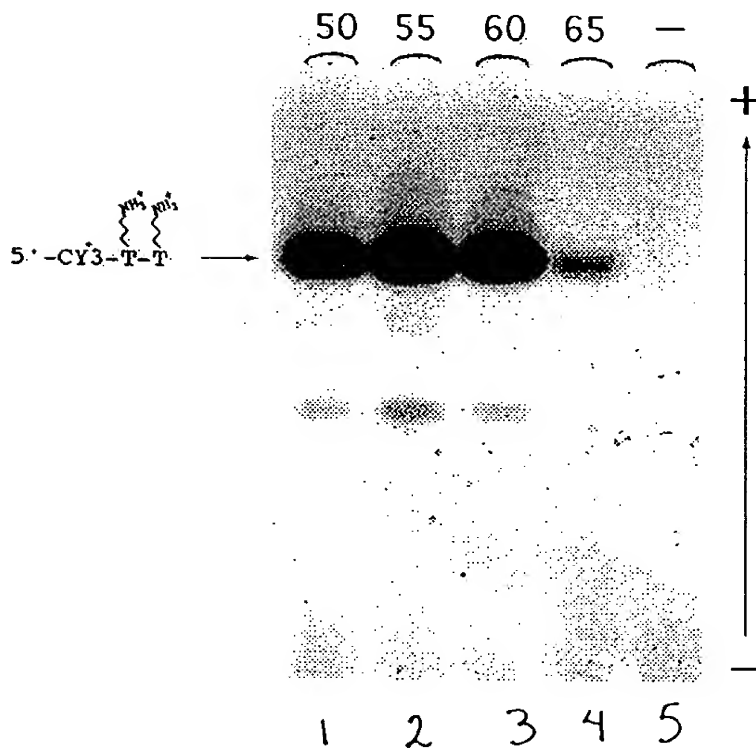


FIGURE 20

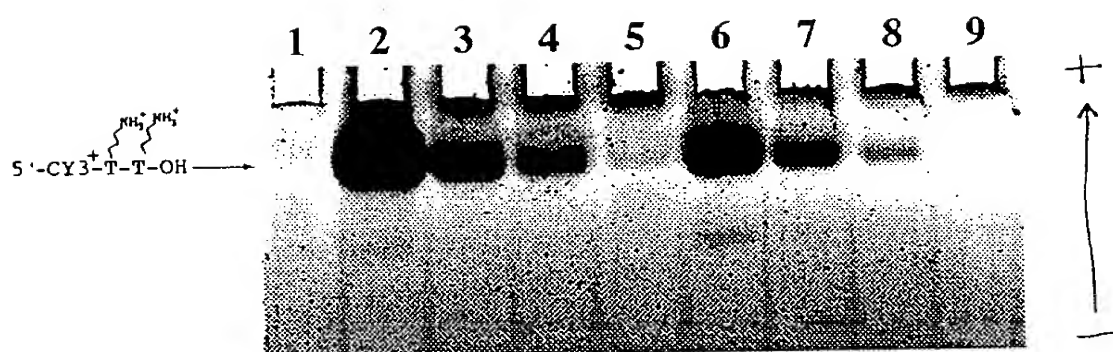


FIGURE 21

A

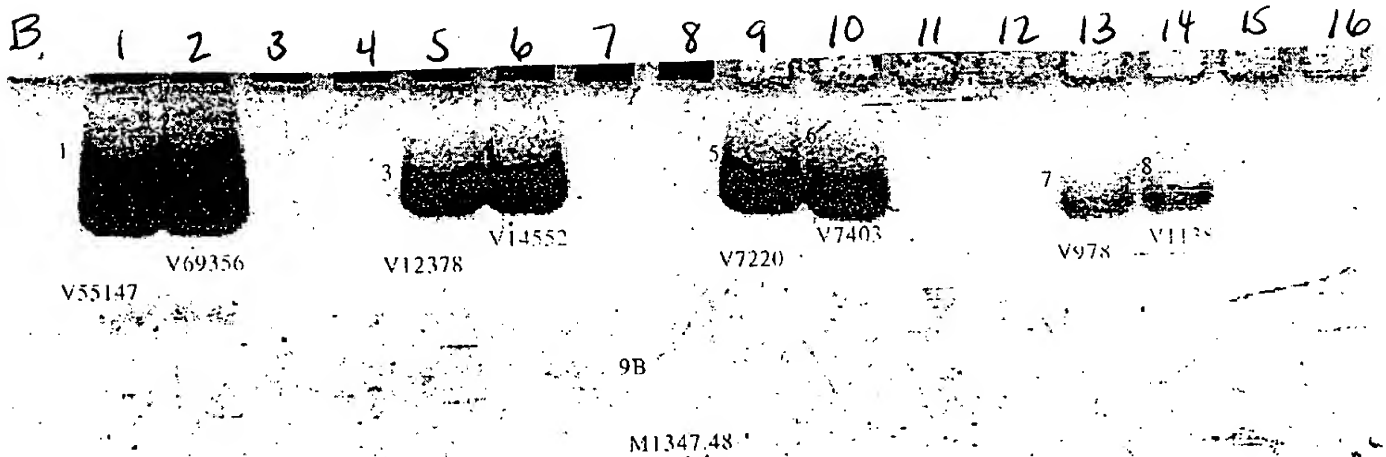
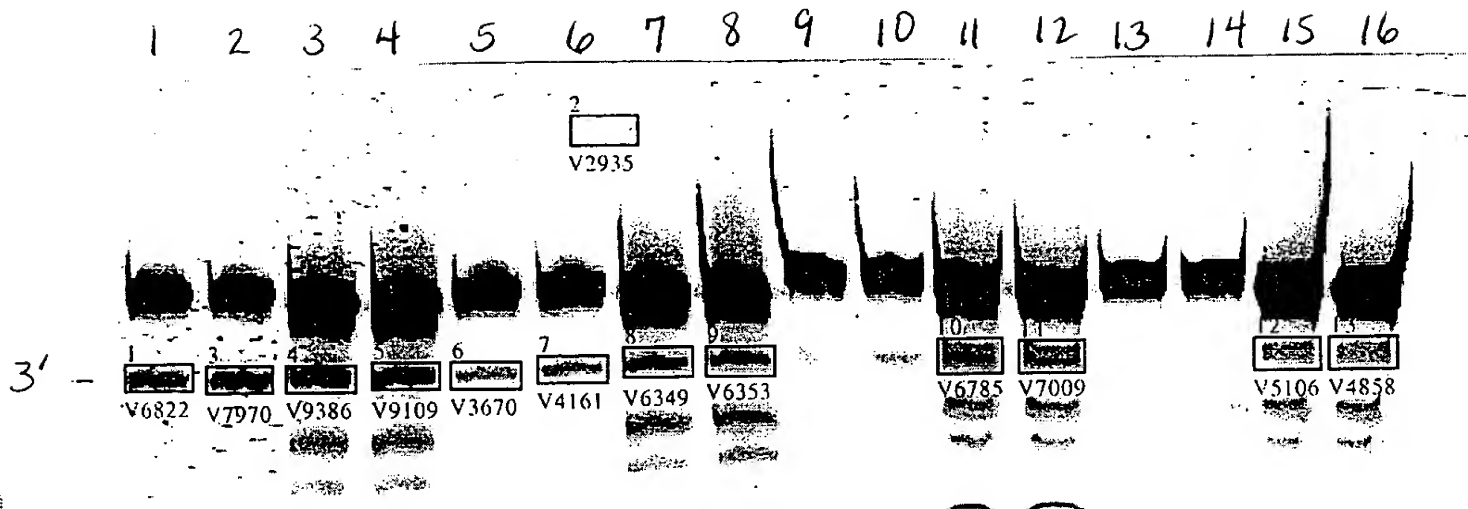


FIGURE 22

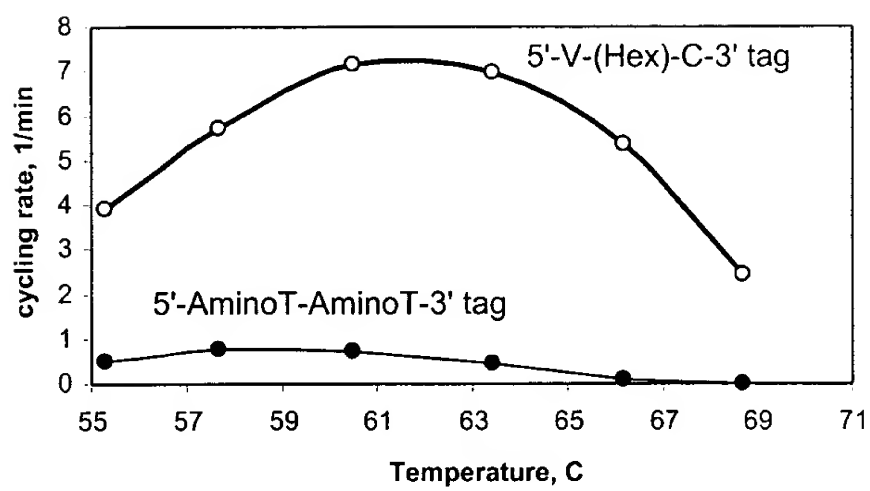
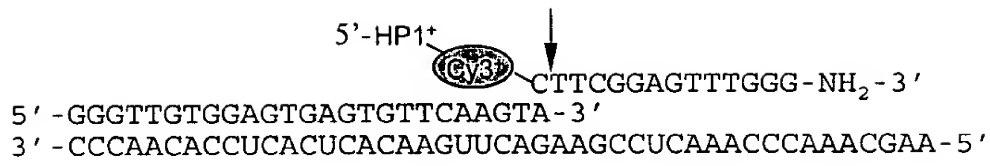
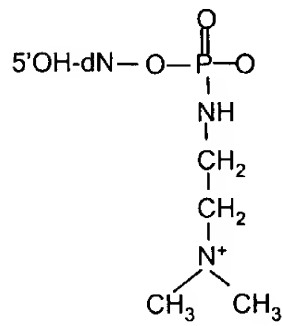


FIGURE 23

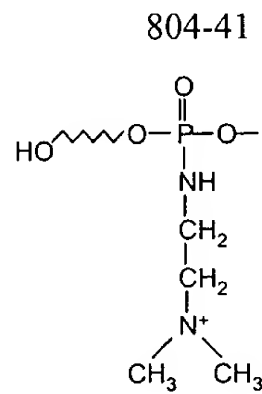
A.



B.



V(dN)



V(HEX)

FIGURE 24A

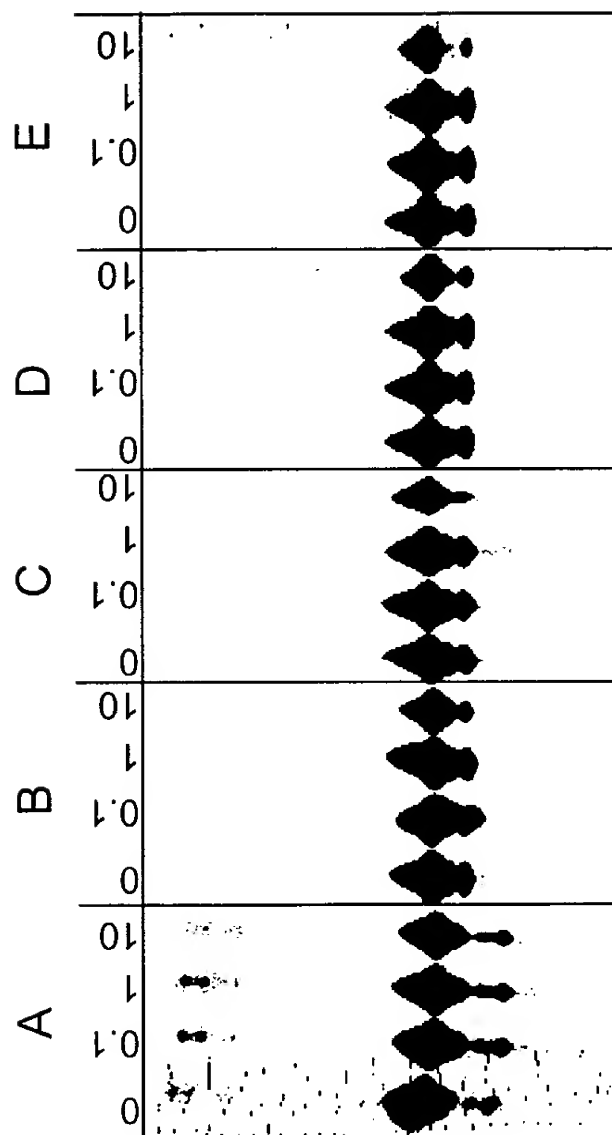


FIGURE 24B

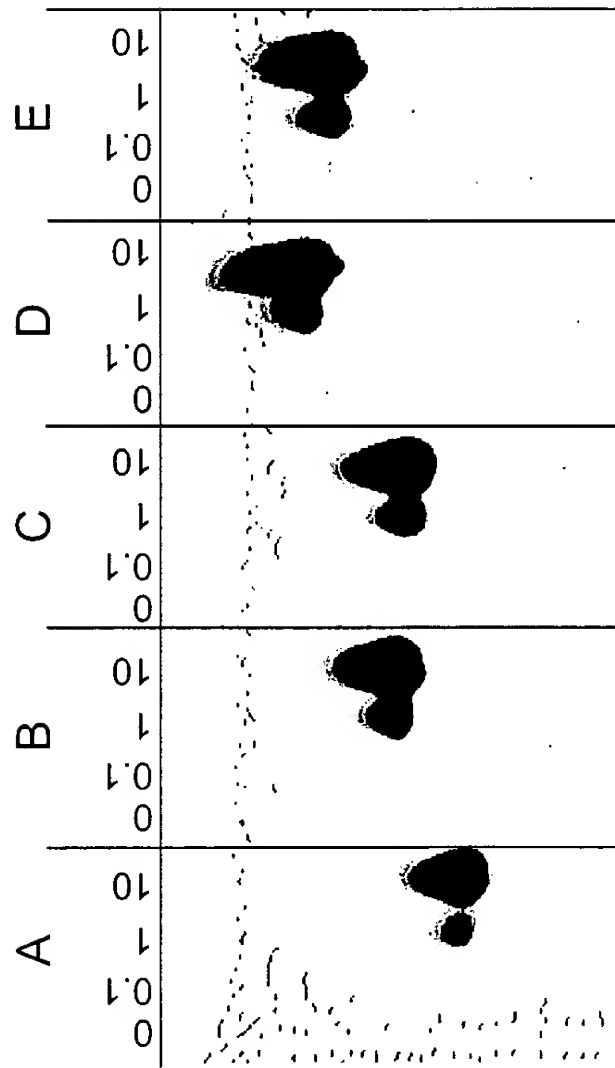


FIGURE 25

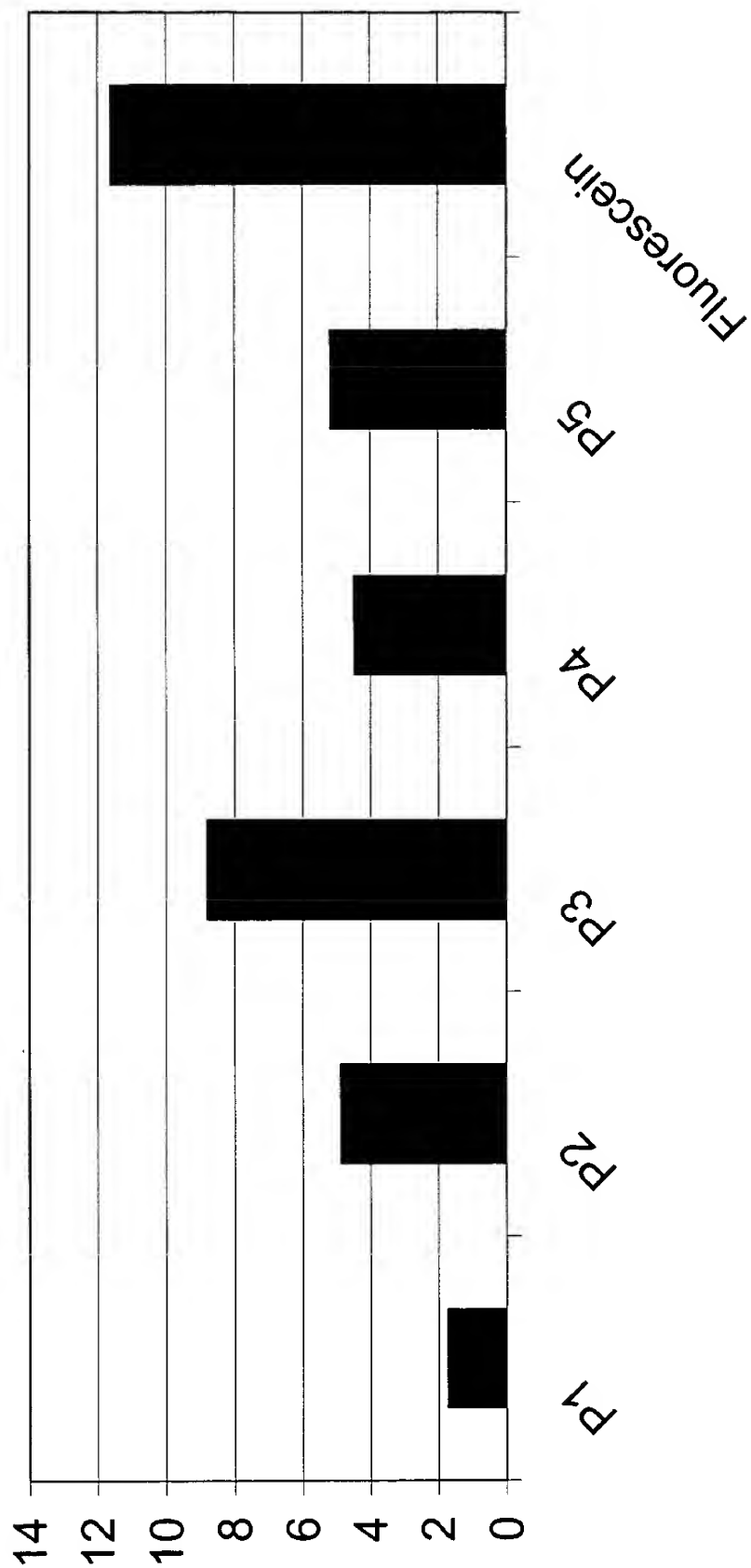


FIGURE 26A

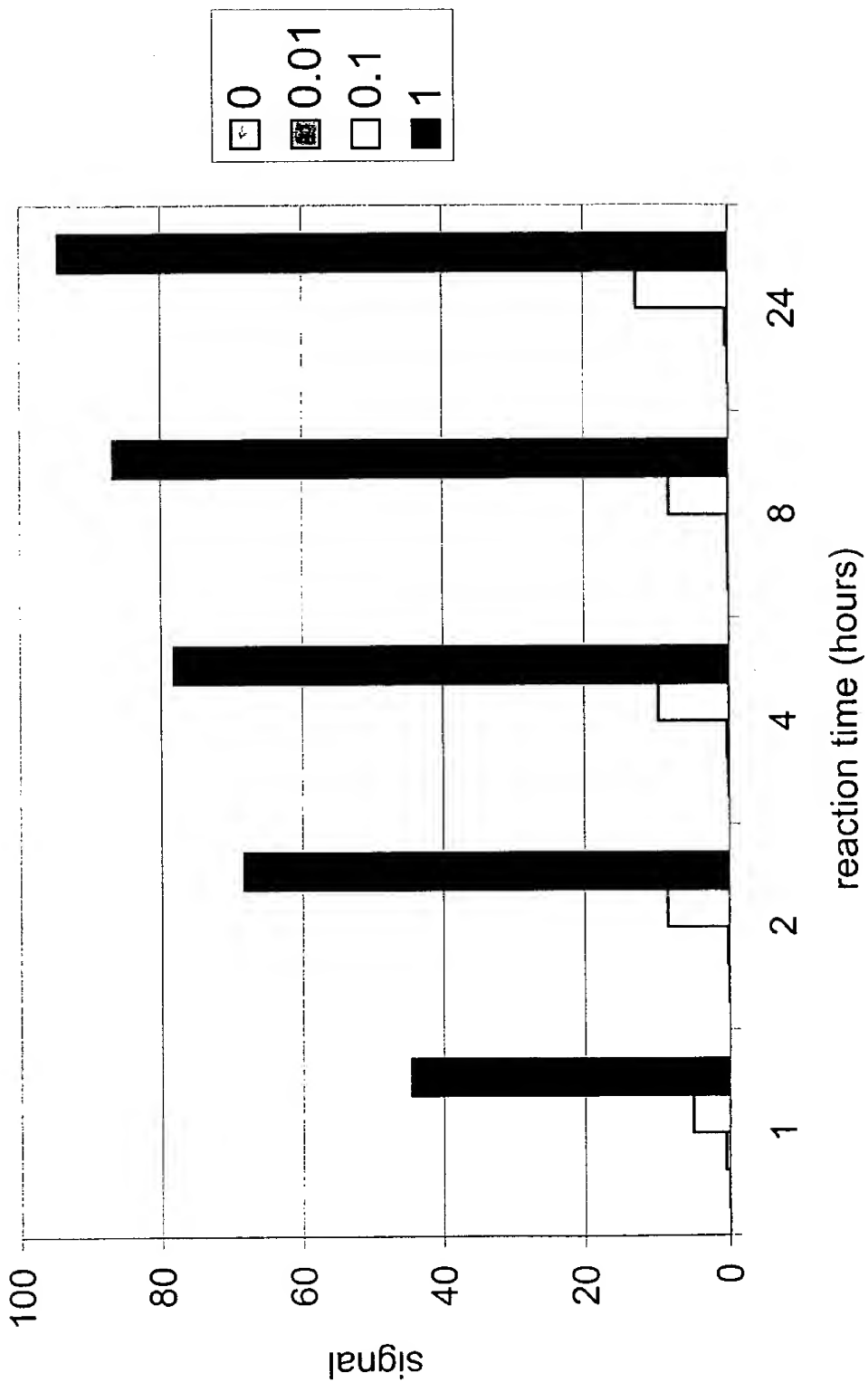


FIGURE 26B

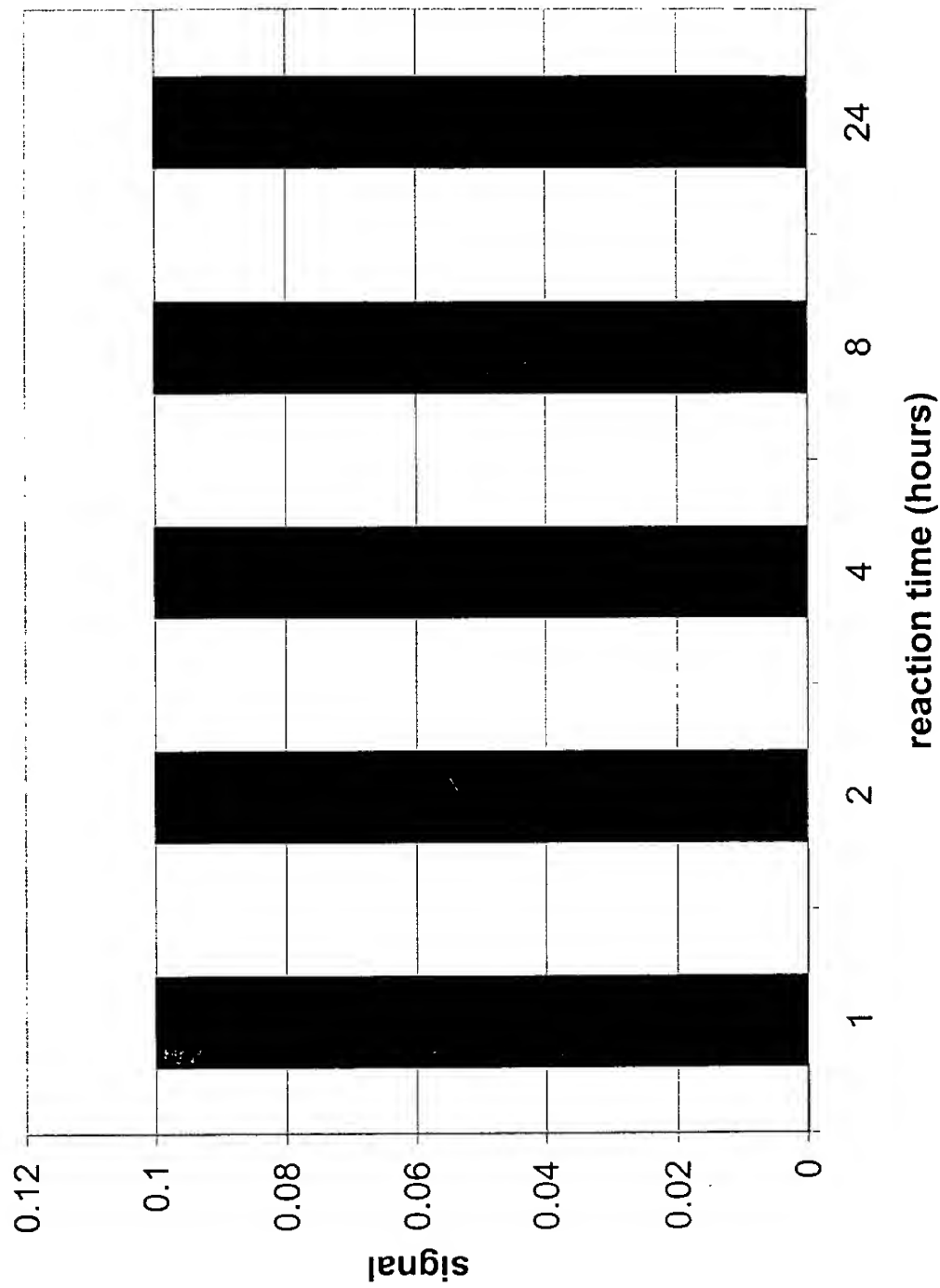


FIGURE 27

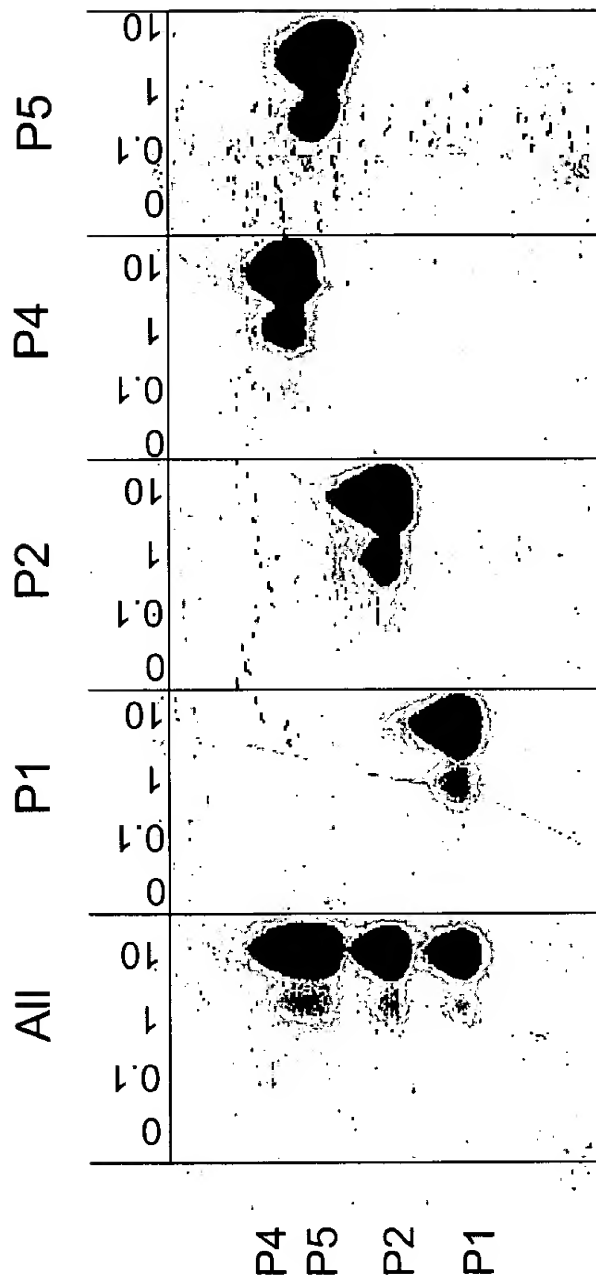
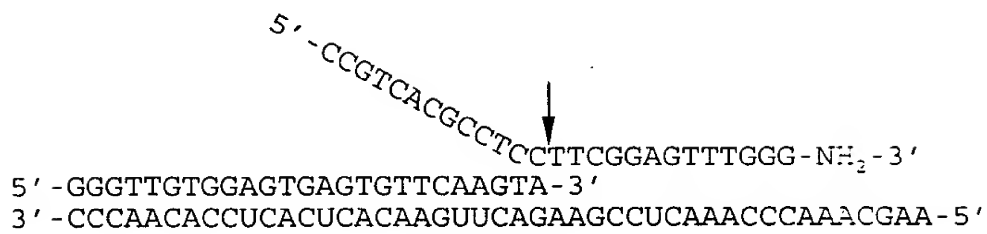
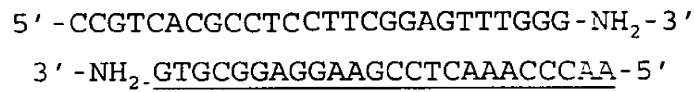


FIGURE 28A

Primary reaction



Human MCP-1 mRNA



Secondary reaction

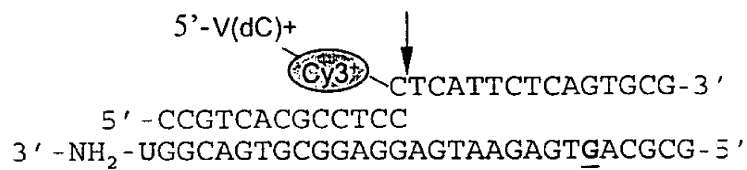
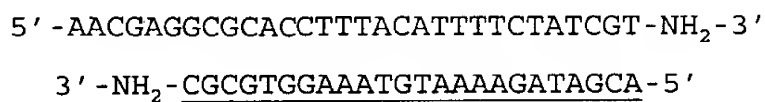


FIGURE 28B

Primary reaction



Human Ubiquitin mRNA



Secondary reaction

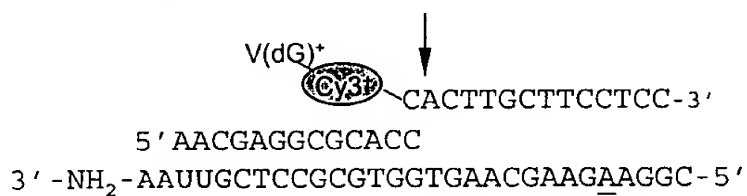


FIGURE 29

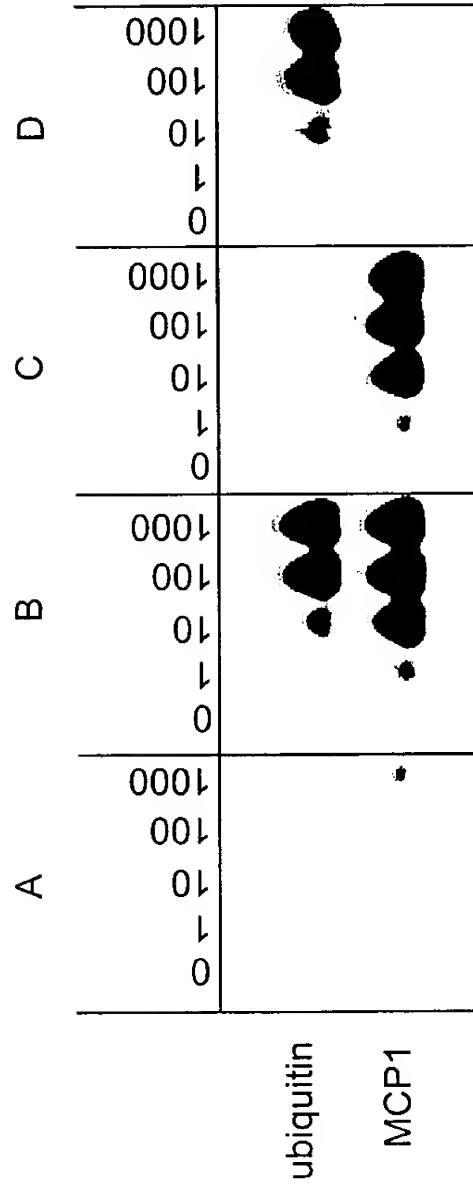


FIGURE 30A

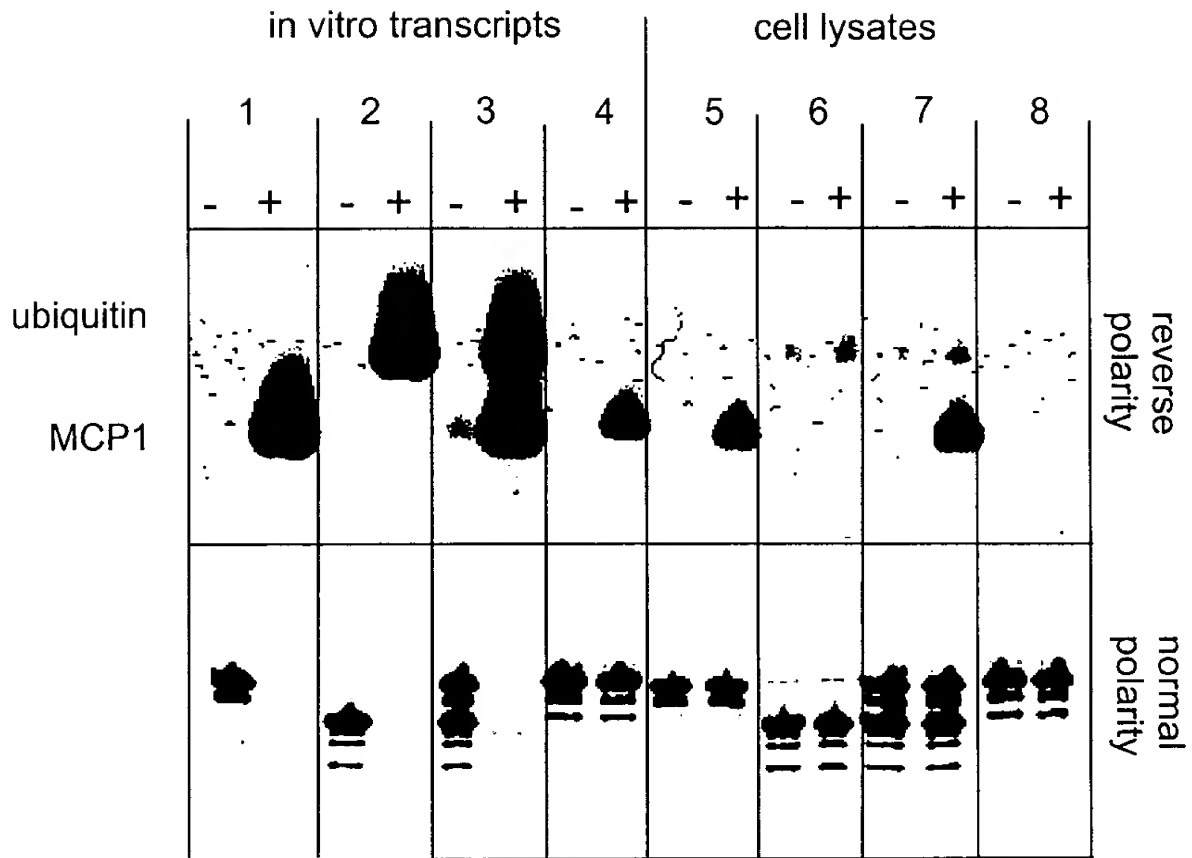
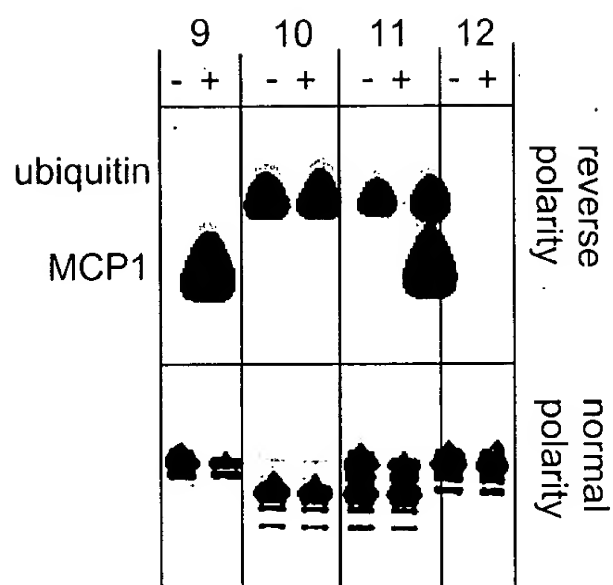


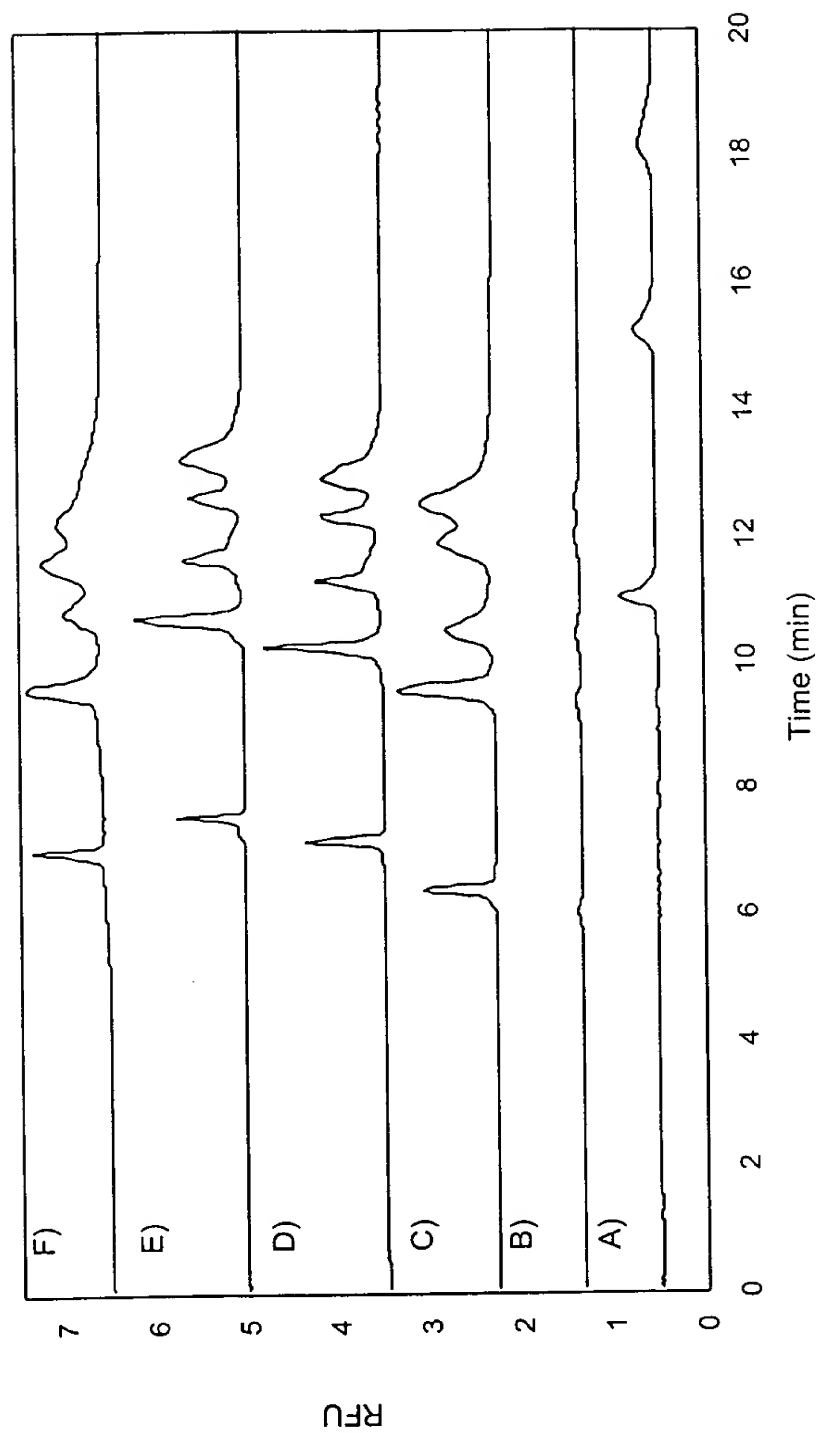
FIGURE 30B



96/92

70000 = 334444

FIGURE 31



9h/εε

FIGURE 32

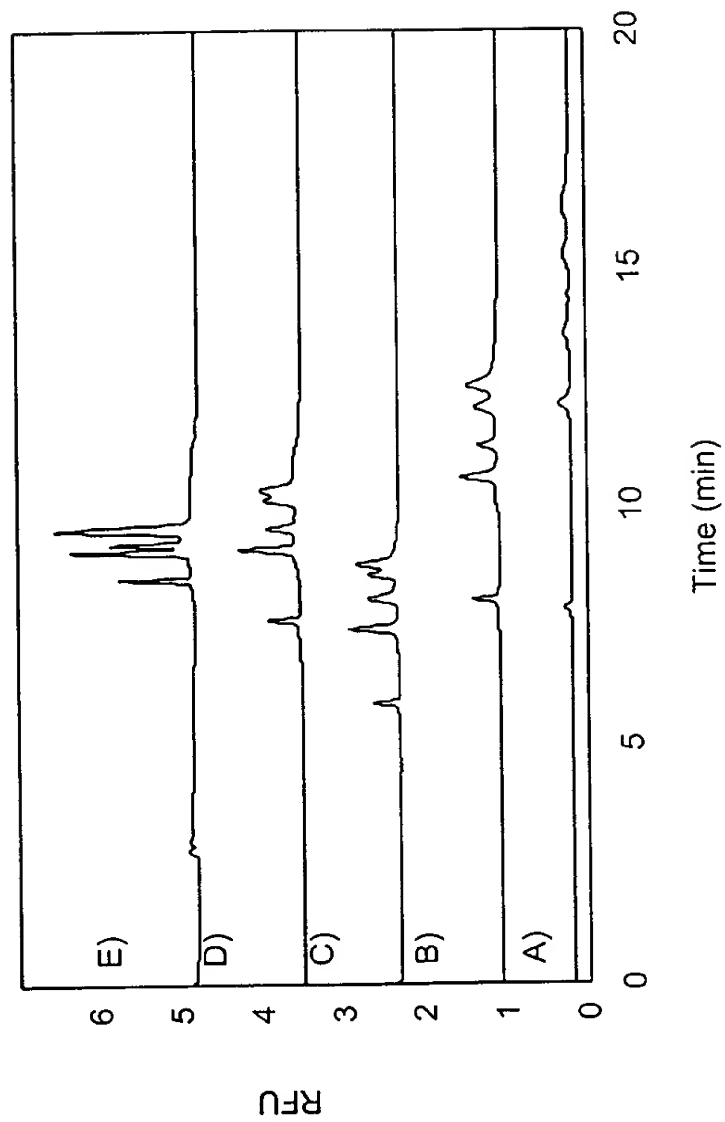


FIGURE 33

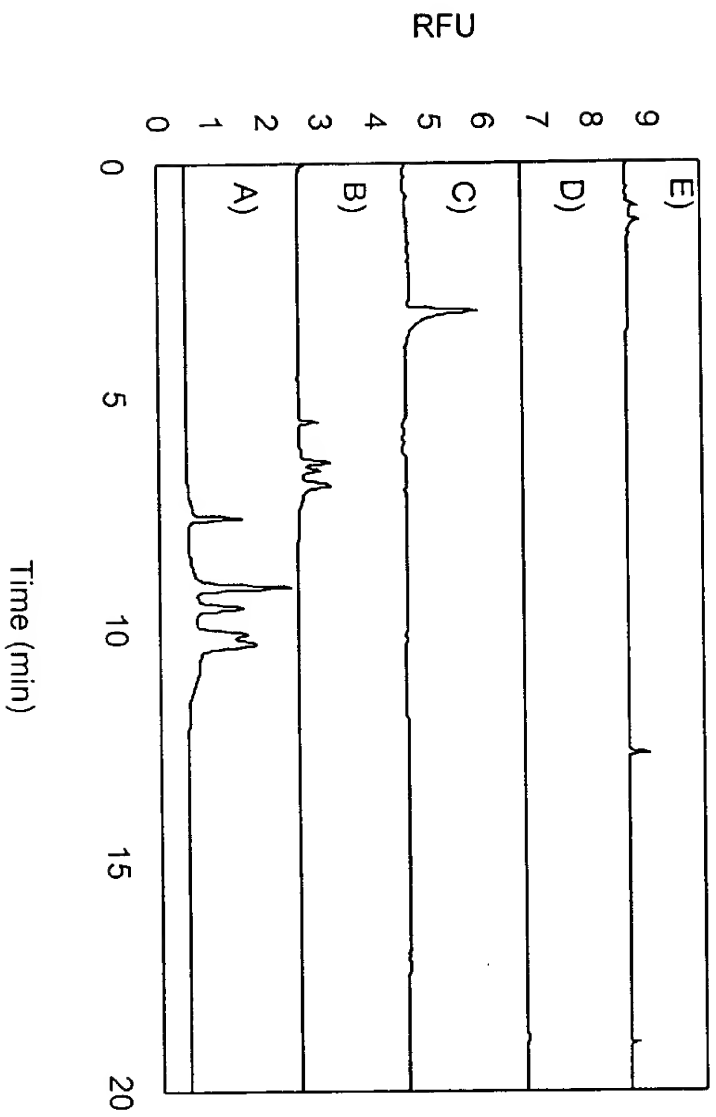


FIGURE 34

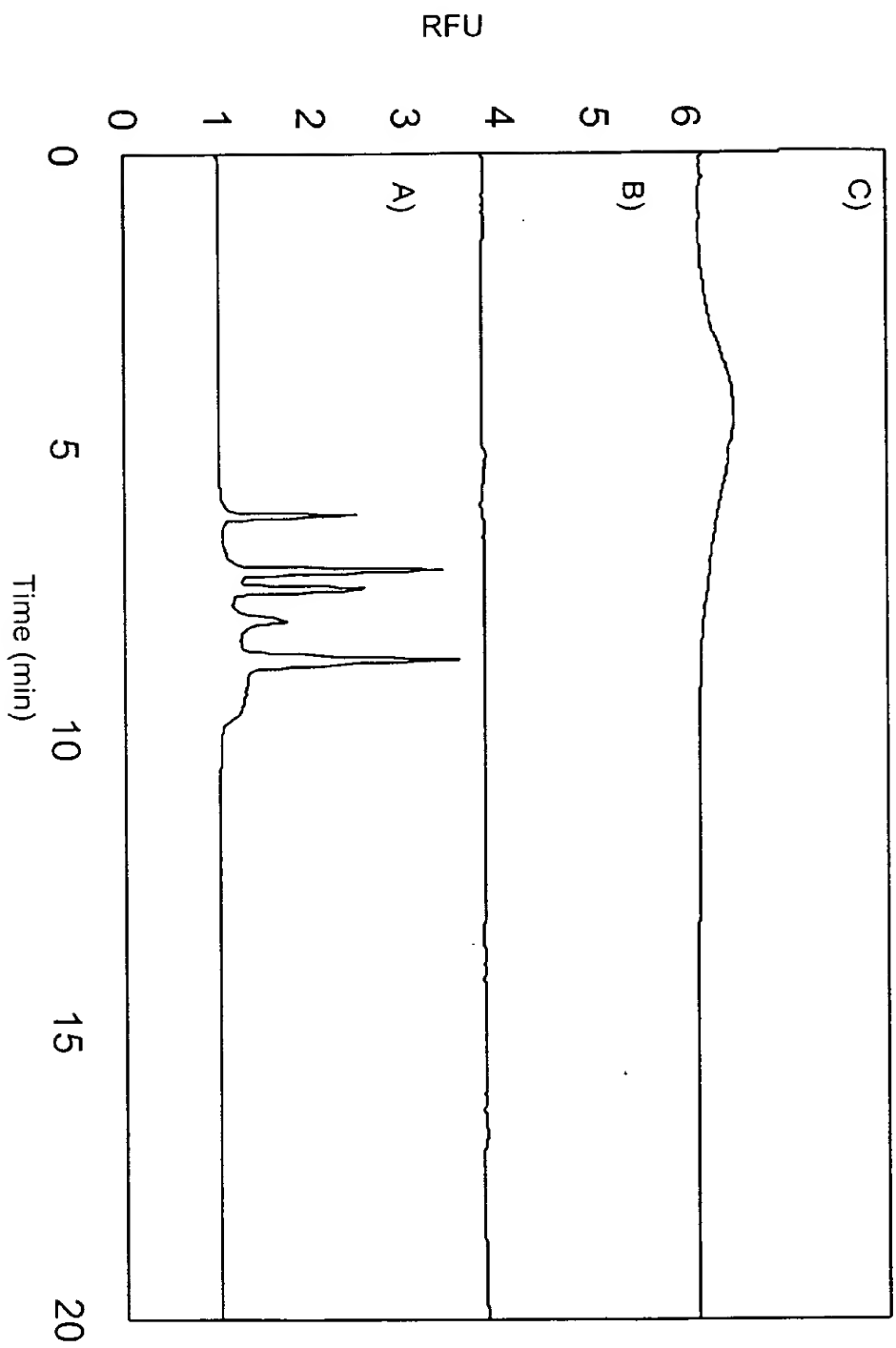


FIGURE 35

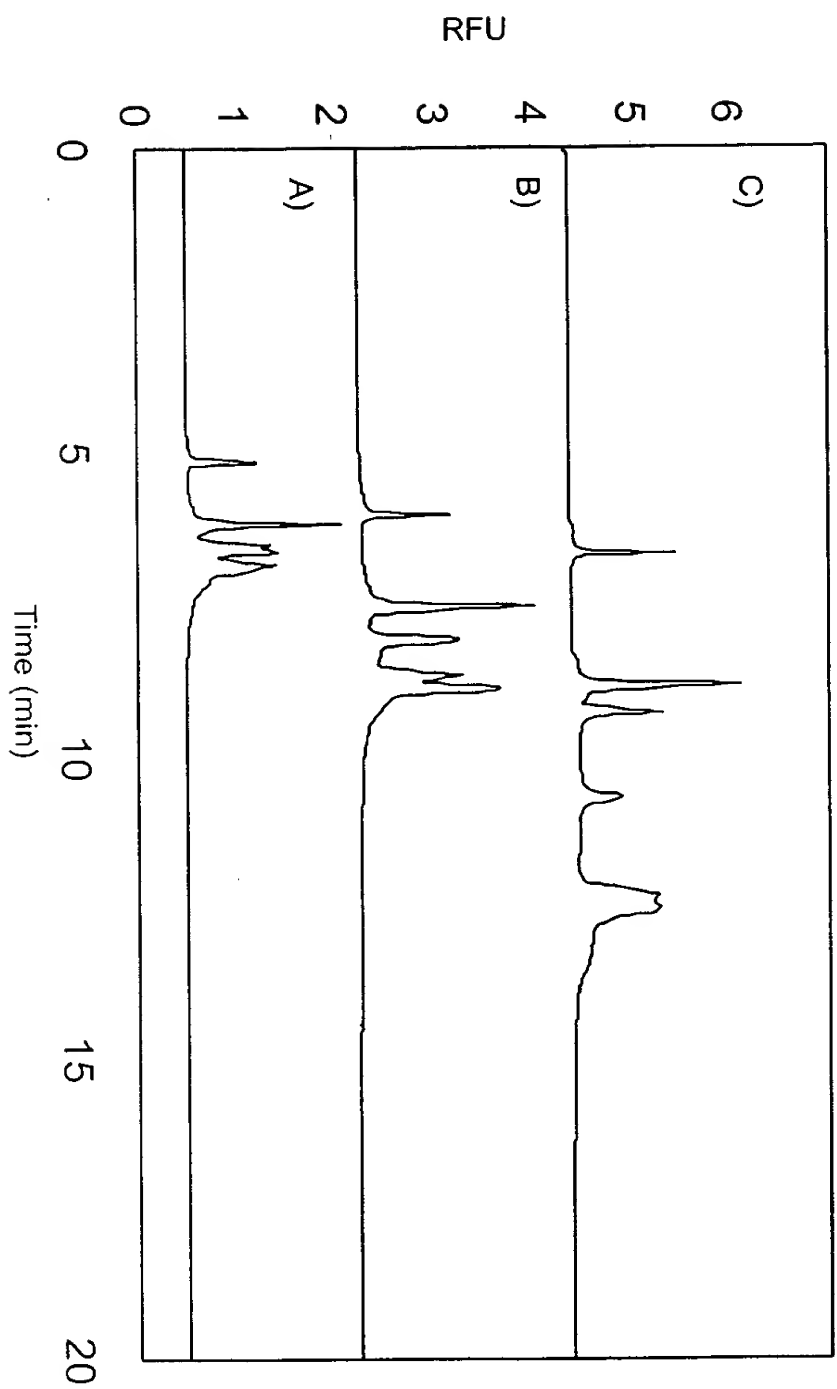
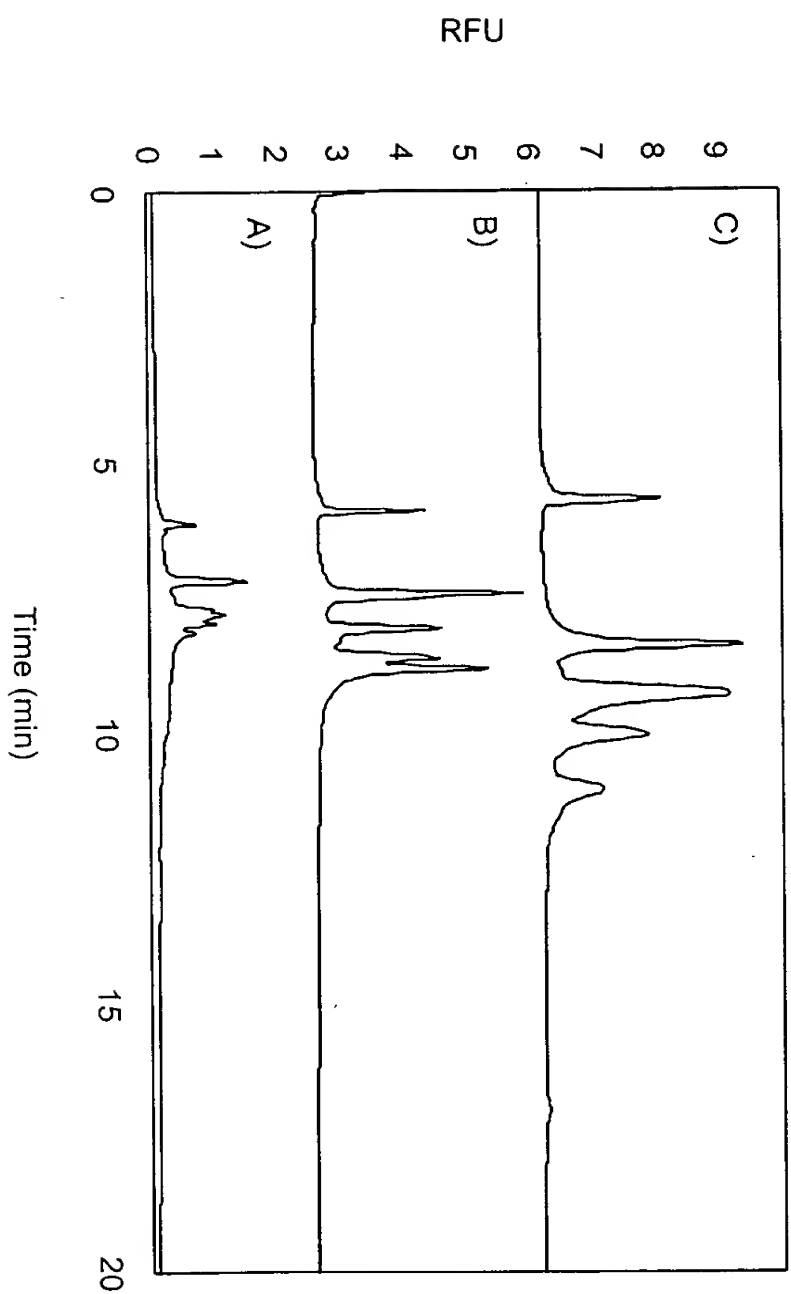


FIGURE 36



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FIGURE 38

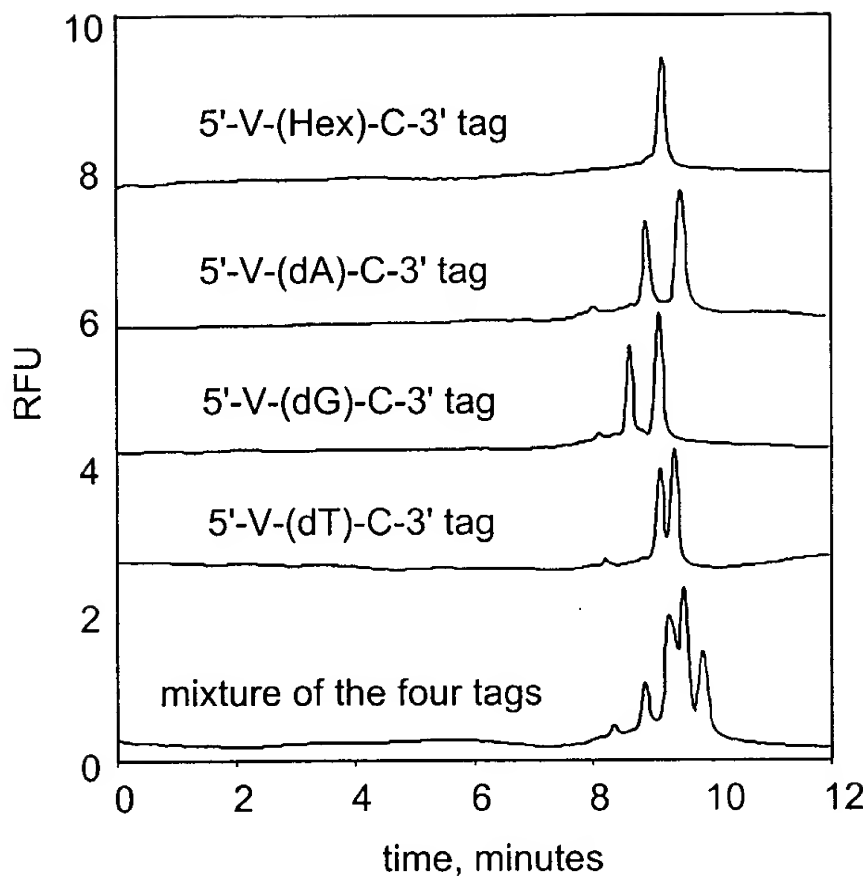


FIGURE 39

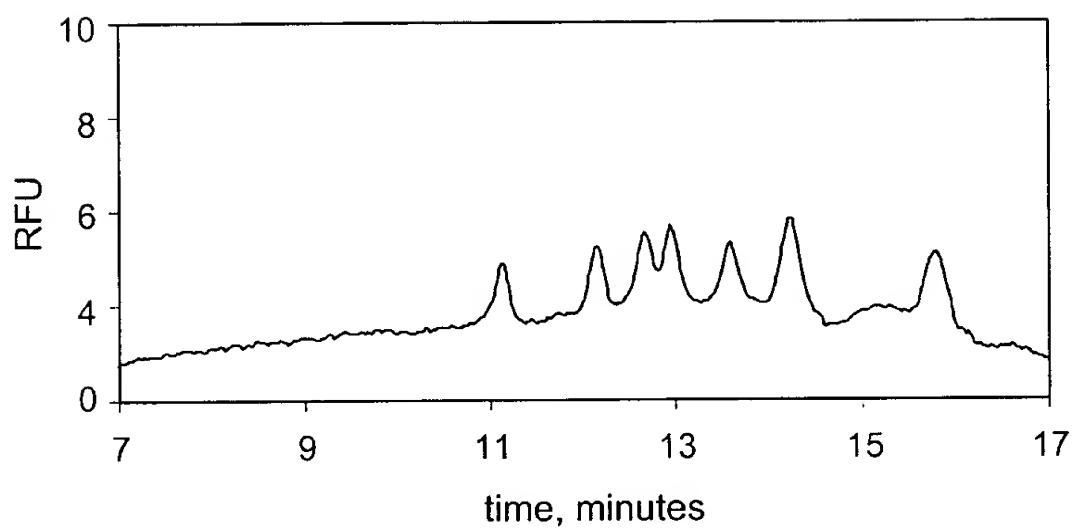
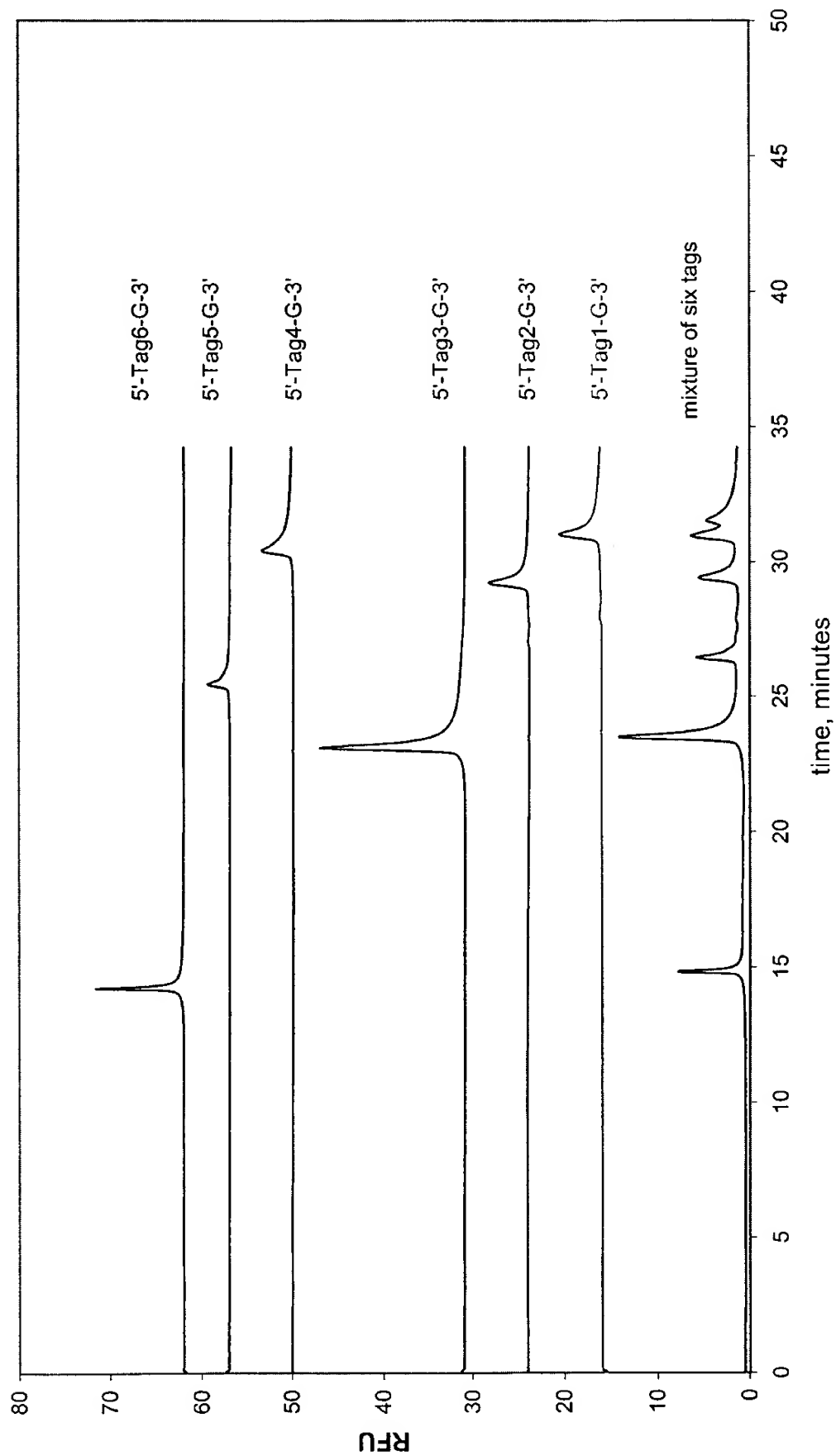


FIGURE 40



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FIGURE 41

A.

5'-Tag1-G-3'

5'-Tag2-G-3'



B.

5'-Tag1-G-3'

5'-Tag2-G-3'



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